

ABSTRACT OF THE DISCLOSURE

A system for controlling the thickness of a layer of copper in the formation of a semiconductor device is provided. The system is comprised of an electroplate tool, a metrology tool, and a controller. The electroplate tool is capable of depositing a layer of copper on a surface of a semiconductor device. The electroplate tool has at least one parameter that may be varied to control a thickness of the layer of copper. The metrology tool is capable of measuring the thickness of the copper layer and delivering a signal indicative thereof. The controller is adapted for receiving the signal, comparing the measured thickness to a desired thickness, and varying the at least one parameter in response to the measured thickness differing from the desired thickness